

CALIFORNIA ENERGY COMMISSION

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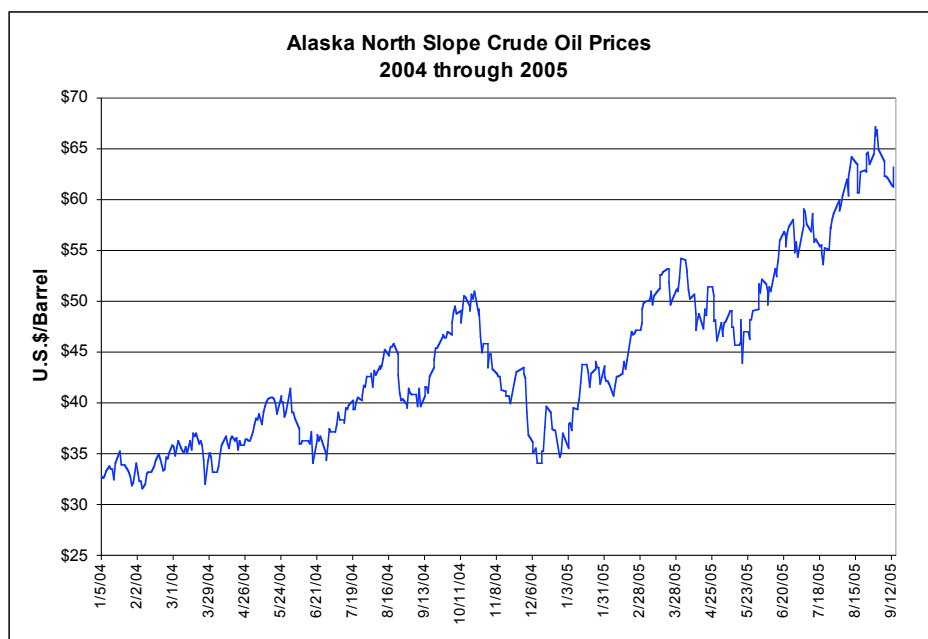
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**Petroleum Watch****September 16, 2005****Introduction**

- Governor Arnold Schwarzenegger has directed the California Energy Commission to prepare a brief petroleum market summary focusing on causes and impacts of recent crude oil and gasoline prices. This summary will discuss petroleum prices, production levels, and inventories in California and the U.S., in particular highlighting the recovery from Hurricane Katrina on the Gulf Coast and its influence on California fuel prices and supplies.

Crude Oil Prices and Inventories

- Commercial stockpiles of crude oil in the U.S. totaled 308 million barrels as of September 9, falling almost 7 million barrels from the previous week and down about 13 million barrels since August 26. **However, stocks are still almost 30 million barrels above last year and about 20 million barrels over the average of the previous five years.**
- After peaking at record-highs on August 30, **world crude oil prices have mostly dropped in the last two weeks.** Prices for Alaska North Slope crude oil, an important refinery input for making gasoline and diesel on the West Coast, that peaked at \$67.06 per barrel on August 30, fell back to \$61.11 by September 13 before rebounding to \$63.09 as of September 14.¹



In 2005, the cost of crude oil has comprised between 42 and 56 percent of the retail price of a gallon of California regular-grade gasoline.

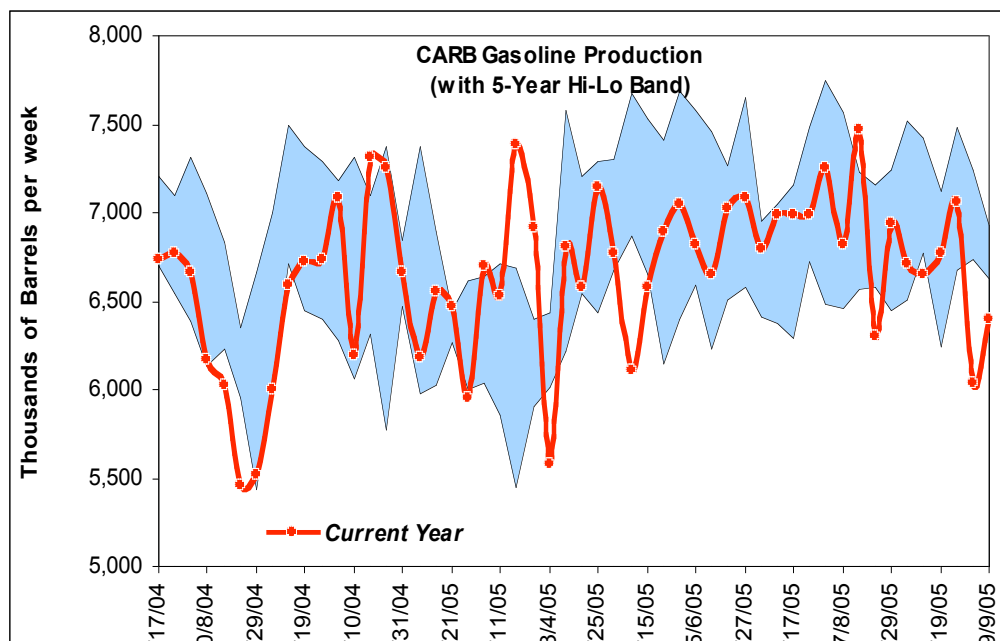
- The loss of Gulf Coast crude oil production to Hurricane Katrina dominates the supply equation, although reduced excess production capacity globally and strong petroleum demand had preconditioned the market for rapid price spikes well before the hurricane's landfall. The retreat from the price spike caused by the hurricane has been largely due to the release of oil and petroleum products from the International Energy Agency (IEA) member countries' strategic reserves, including oil from the U.S. Strategic Petroleum Reserve (SPR). The IEA and the U.S. Energy Information Administration (EIA) have also recently reported that **petroleum demand growth finally seems to be falling due to high prices and hurricane damage. The latest EIA weekly assessment shows U.S. implied gasoline demand decreasing to 8.6 million barrels per day, down about 770,000 barrels per day from two weeks earlier.**
- Immediately after Hurricane Katrina hit the Gulf Coast, about 95 percent of Gulf Coast oil production, over 1.4 million barrels per day, was shut down. As of September 14, the U.S. Minerals Management Service was estimating that shut down Gulf Coast oil production declined to about 56 percent, or about 844,000 barrels per day. However, this estimate was nearly unchanged from the previous week, indicating that substantial capacity in the region could remain shut down for months. After a similar time, curtailment caused by Hurricane Ivan last year was down to about 29 percent. The differences are due in large part to the significantly greater damage to coastal infrastructure from Hurricane Katrina, and the difficulties reassembling technical staff and workers. At this time, it is not known if damage to undersea pipelines will be as great a problem as with Hurricane Ivan. Cumulative lost oil production in the Gulf Coast was almost 20 million barrels as of September 12.
- As of September 12, the U.S. Department of Energy had approved releases of 23.6 million barrels of crude oil from the SPR to U.S. refiners. The reduced crude oil production from the Gulf of Mexico may necessitate additional releases from the SPR over the coming weeks, although the most pressing needs are for sweet (low sulfur) crude oil and gasoline. IEA member countries, including the U.S., have agreed to make available 2.1 million barrels per day of petroleum from strategic reserves, including over 300,000 barrels per day of gasoline primarily from Europe. The IEA has committed to provide 60 million barrels over 30 days, half of that from the U.S. SPR.
- Although California produces about 42 percent of the crude oil used as feedstocks to the state's refineries, the price of crude oil here moves in tandem with prices on world oil markets. The same is true of gasoline and diesel prices. When a shortage develops in one area and prices rise, traders in other regions have the option to transport fuels to the affected area if the costs and risks of doing so are warranted. In this way, after adjusting for transportation costs and differences in crude oil or fuel qualities, prices tend to balance out between regions over time.

Wholesale Gasoline and Diesel Prices

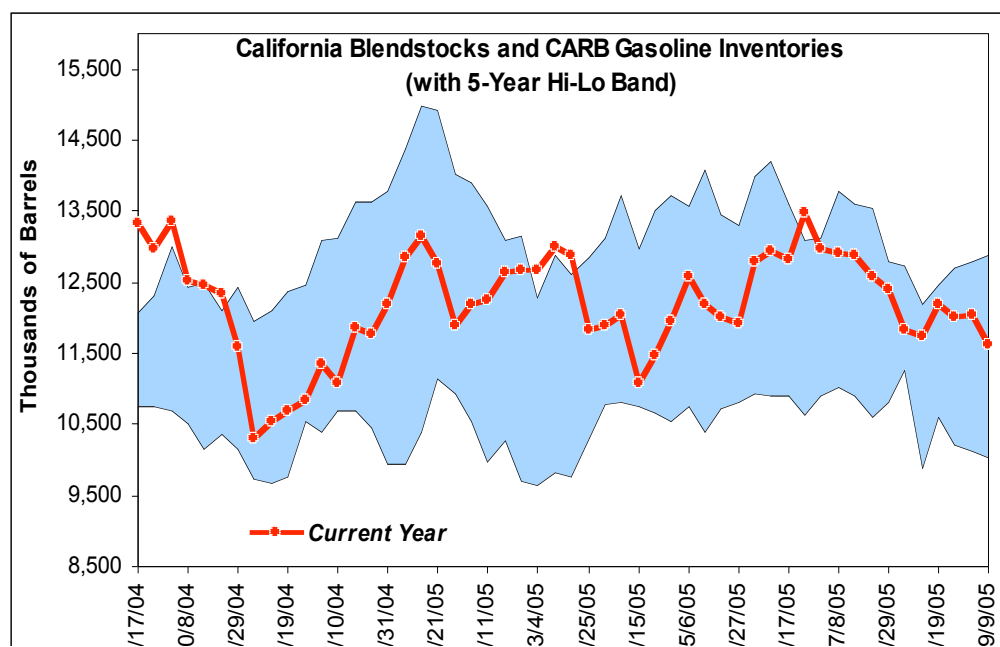
- The loss of Gulf Coast refining and oil production capacity to Hurricane Katrina, on top of cumulative production losses from several refinery outages nationwide during August, caused wholesale prices in major U.S. refining regions to spike sharply. News of releases from strategic petroleum reserves and reports of lagging demand just as quickly pulled prices back down. U.S. gasoline inventories broke a 3 month trend of declines, adding almost 2 million barrels by September 9 compared to the previous week. However, this is down by almost 25 million barrels from late May and more than 6 million barrels below the average of the last 5 years. Meanwhile, a power outage in the Los Angeles area on September 12 caused temporary problems for three refineries in the region.
- In the aftermath of the hurricane, spot wholesale prices have behaved very erratically across the nation. According to the EIA, as of September 13, Los Angeles spot wholesale gasoline prices had fallen to \$2.13 per gallon, down sharply from the peak of \$2.96 on August 31, and almost 10 cents below levels from August 26, before the hurricane hit the Gulf Coast. Other pricing services reported greater price increases on September 13-14, due to the loss of power to Los Angeles refineries. Gulf Coast spot gasoline prices that had peaked at \$2.96 on September 1 had fallen to \$2.04 by September 13. Initially, over 2 million barrels per day of refining capacity was shut down across the Gulf Coast region due to the hurricane. As of September 14, five refineries in Louisiana and Mississippi with about 930,000 barrels per day of capacity remained idled by storm damage and could take months to return to production. These refineries represent about five percent of the U.S. refining capacity.²
- Differences between California spot wholesale gasoline prices and those in the Gulf Coast and New York Harbor since the hurricane struck have also been vacillating erratically. Los Angeles spot prices that were 39 cents higher than in the Gulf Coast and 23 cents higher than in New York on August 29 were 14 cents and 23 cents less, respectively, in those two regions as of September 8. By September 13, California spot gasoline prices were again higher than the Gulf Coast by 8 cents, but remained 7 cents lower than New York.
- Wholesale California diesel price volatility has been less severe than for gasoline, but still much greater than usual. U.S. distillate inventory levels have been relatively more substantial than gasoline inventories in recent weeks. U.S. distillate stocks were more than 133 million barrels as of September 9, down almost a million barrels from September 2, but 7.5 million barrels above the average of the previous 5 years. Los Angeles spot diesel prices are \$2.08 per gallon as of September 13, down 39 cents per gallon from the peak of \$2.47 on September 1, but up almost 5 cents from the previous day due to Los Angeles area power outages. Gulf Coast spot diesel prices that peaked at \$2.24 on September 1 had dropped back to \$1.89 by September 13.

California Refinery Production and Inventories

- California reformulated gasoline production continues to fluctuate widely from week to week. Production has been struggling to regain more normal levels since late July. Planned maintenance and unplanned outages during late August caused further setbacks; output declined further to about 6 million barrels for the week ending September 2. Production rose to almost 6.4 million barrels for the week ending September 9, but remains well below the 5 year range.



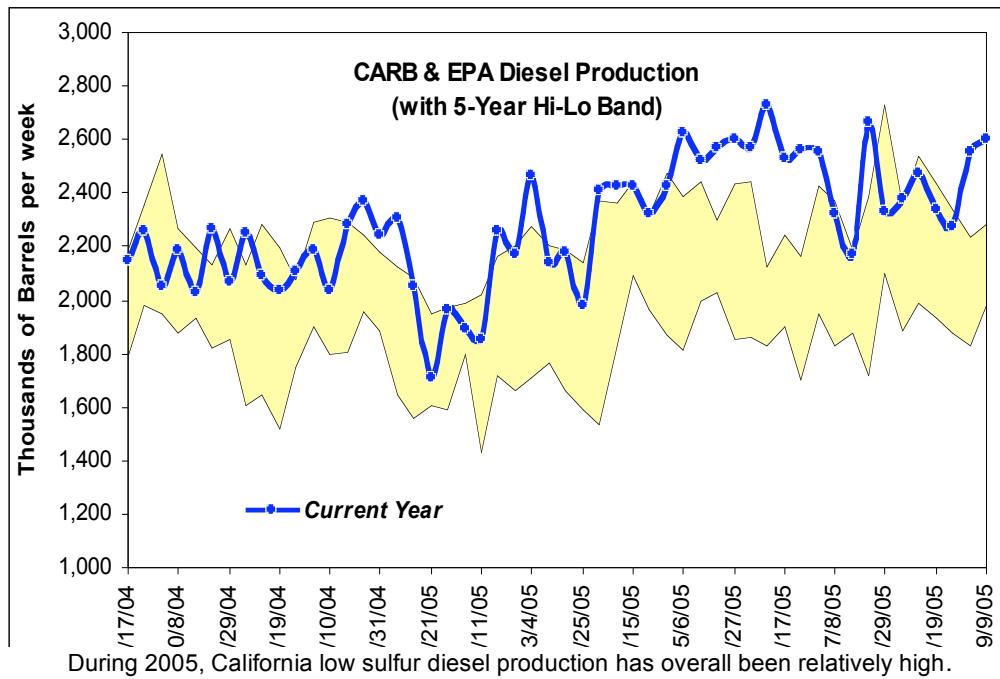
California gasoline production has been well below normal in the last two weeks due to planned refinery maintenance and unplanned outages.



By historical standards, California gasoline inventories have been relatively normal in recent months.

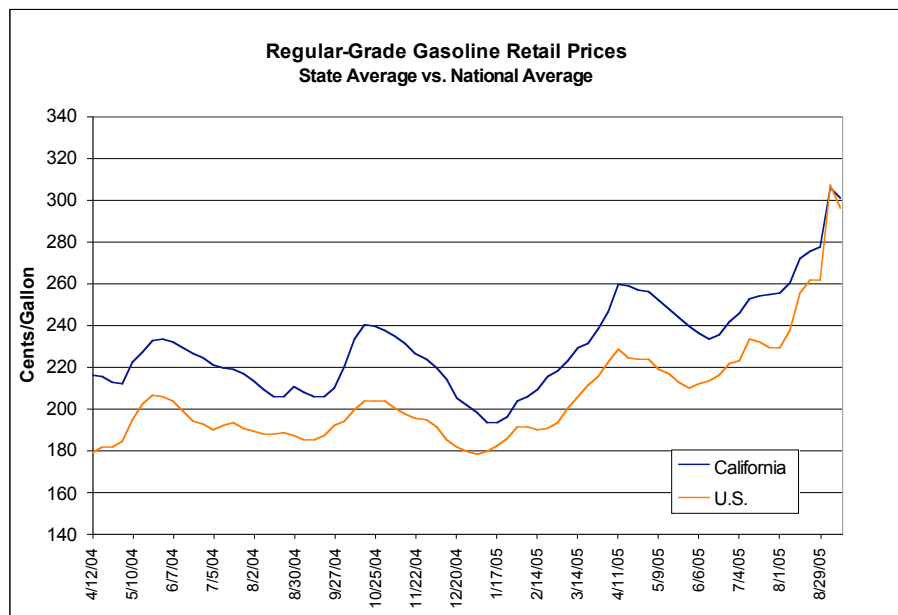
- Inventories of reformulated gasoline on September 2 fell 4 percent from the previous week, while stocks of gasoline blending components fell by about 3 percent. Combined reformulated gasoline and gasoline blendstock inventories are still in the middle of the range for the previous 5 years. However, these stocks are down almost 10 percent from last year.³
- With the temporarily waiver of the Jones Act rules, which limit marine traffic between U.S. ports to U.S. flagged ships, volumes of fuels normally transported by major pipelines throughout the Eastern U.S. from Gulf Coast refineries have been increasing steadily following shutdowns associated with the hurricane. It is not yet clear what the effects will be in exercising this waiver, although it is restricted to petroleum shipments. Unless otherwise directed, this waiver will expire on September 19, 2005.
- California low-sulfur diesel production (California refineries manufacture two types of low sulfur diesel: diesel that meets California standards and diesel for use in other states that meets US EPA standards) continues to climb. As of September 9, low sulfur diesel production was well above the high end of the five-year range, as it has been for most of this year. However, high demand in California and elsewhere in the country, as well as unplanned refinery outages that affected diesel-producing units in the state, have kept low-sulfur diesel inventories from growing significantly. These diesel stocks have been at the low end of the five-year range for over two months. As of September 9, state low-sulfur diesel inventories were down over 7 percent from the previous week and almost 17 percent lower than a year ago.
- On August 31, to alleviate possible fuel shortages across the country and to help meet emergency demand, U.S. EPA granted a nationwide fuel waiver that allows refiners, importers, distributors, carriers and retail outlets to supply gasoline and diesel fuels that do not meet standards for emissions. The original temporary waiver was in effect through September 15. U.S. EPA issued a subsequent 20 day waiver on September 13 that is valid through October 3, 2005. California will need to receive two more waivers to permit continued use of winter higher RVP gasoline blending through October 31, 2005 (October 31 is the last day of California's summer driving season). U.S. EPA will continue to monitor and assess the fuel supply situation. The U.S. EPA also granted a waiver that allows high-sulfur diesel can be used as a substitute for low-sulfur diesel fuel through September 15 in most of the United States, including California. Specifically for the region directly affected by the Hurricane (Petroleum Administration Defense District 1) the diesel waiver will continue past October 15, 2005.
- Before an early transition to winter gasoline blending (that would allow fuel with higher RVP to be sold) could start in California, the Air Resources Board (ARB), Division of Measurement Standards (DMS), and Office of Administrative Law (OAL) all had to take various procedural actions. ARB conducted an Emergency Hearing on September 8 on their proposed relief from volatility rules and ARB decided to modify their summer gasoline rules. The OAL approved ARB and DMS actions. Additionally, Kinder Morgan issued a letter specifying a new

gasoline code for product distributed through their pipeline system. Refiners in California could begin producing between 4 and 10 percent more gasoline once the fuel is produced to these new specifications.



Retail Gasoline and Diesel Prices

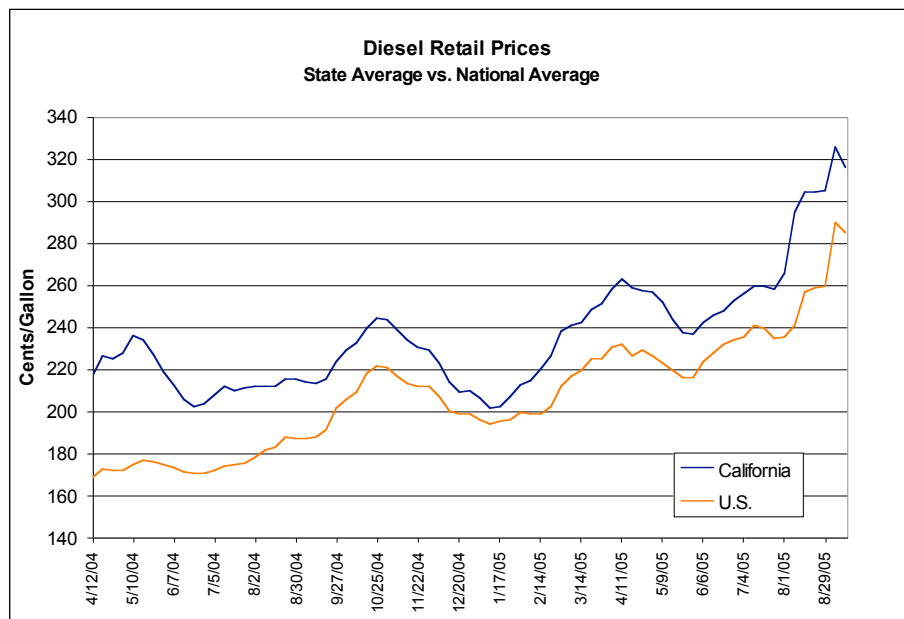
- California retail regular-grade gasoline prices rose continuously between June 13, when prices averaged \$2.33 per gallon, and September 5, when prices reached \$3.06 as a result of crude oil price spikes, unplanned refinery outages throughout the country, and Hurricane Katrina. As of September 12, following releases of crude oil and petroleum products from strategic petroleum reserves of IEA member countries, the statewide average price for regular gasoline had retreated to \$3.00 but was still 95 cents above a year ago.
- Nationally, retail gasoline prices also retreated from a record high \$3.07 per gallon as of September 5 to \$2.96 on September 12, dropping U.S. retail prices back to more than 4 cents below California prices. California retail gasoline prices have averaged almost 24 cents per gallon more than the U.S. over the last year.



Retail prices in California and the U.S. breached the \$3 per gallon mark, before dropping back in the most recent week.

- California retail diesel prices also dropped from record highs reached on September 5, when state diesel prices spiked to \$3.25 per gallon. As of September 12, prices were \$3.16 per gallon, \$1.03 above a year ago.
- The difference between California and U.S. average retail diesel prices continues to decline. As of August 8, California retail prices were almost 54 cents per gallon above the U.S. By September 12, this difference had declined to 31 cents.
- Retail diesel prices continue to remain high relative to gasoline prices in California and the nation. Loss of distillate supplies due to refinery problems, high demand for diesel and other distillates worldwide, and concerns about the adequacy of distillate supplies for next winter as sulfur regulations are tightened

had California retail diesel prices as much as 34 cents above retail gasoline prices in August. As of September 12, the retail price of diesel in California exceeded regular-grade gasoline by about 15 cents, down 4 cents from the previous week. Average U.S. retail diesel prices that had dropped from roughly even with U.S. gasoline prices during August to 17 cents less as of September 5 narrowed the difference to 11 cents less by September 12.



Unlike gasoline prices, retail diesel prices in California have maintained their typical differential to U.S. retail prices during recent weeks.

¹ ANS crude oil prices are from the Wall Street Journal. U.S. crude oil and product inventory estimates are from the Energy Information Administration of the U.S. Department of Energy.

² Spot wholesale and retail gasoline and diesel prices are from the Energy Information Administration of the U.S. Department of Energy.

³ California refinery production and inventory information are from the Petroleum Industry Information Reporting Act (PIIRA) database maintained by the California Energy Commission.